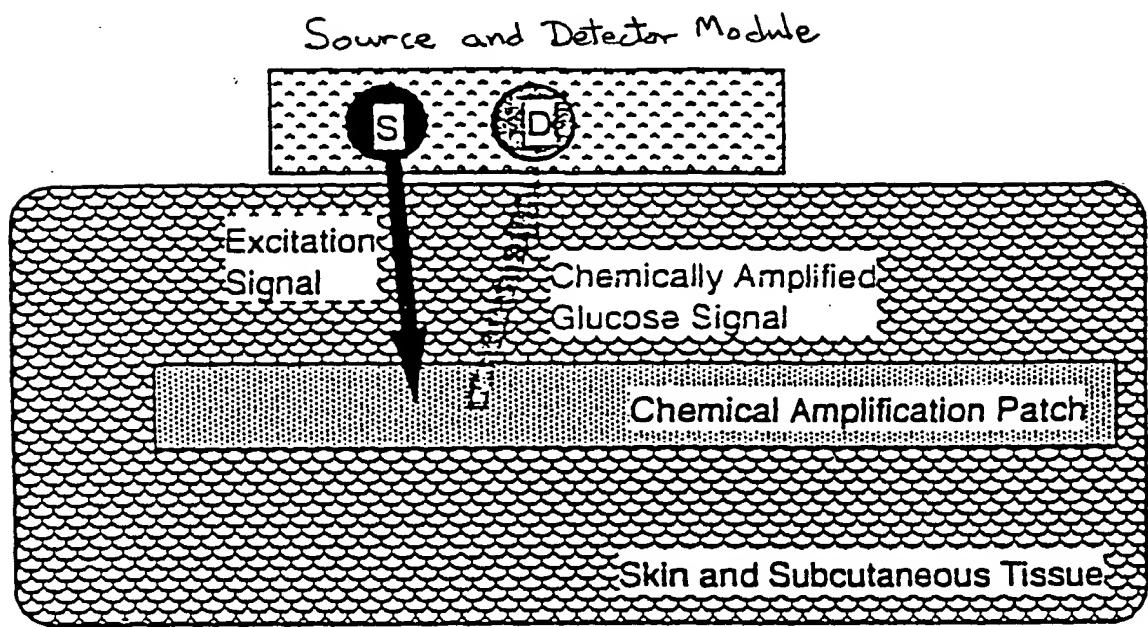
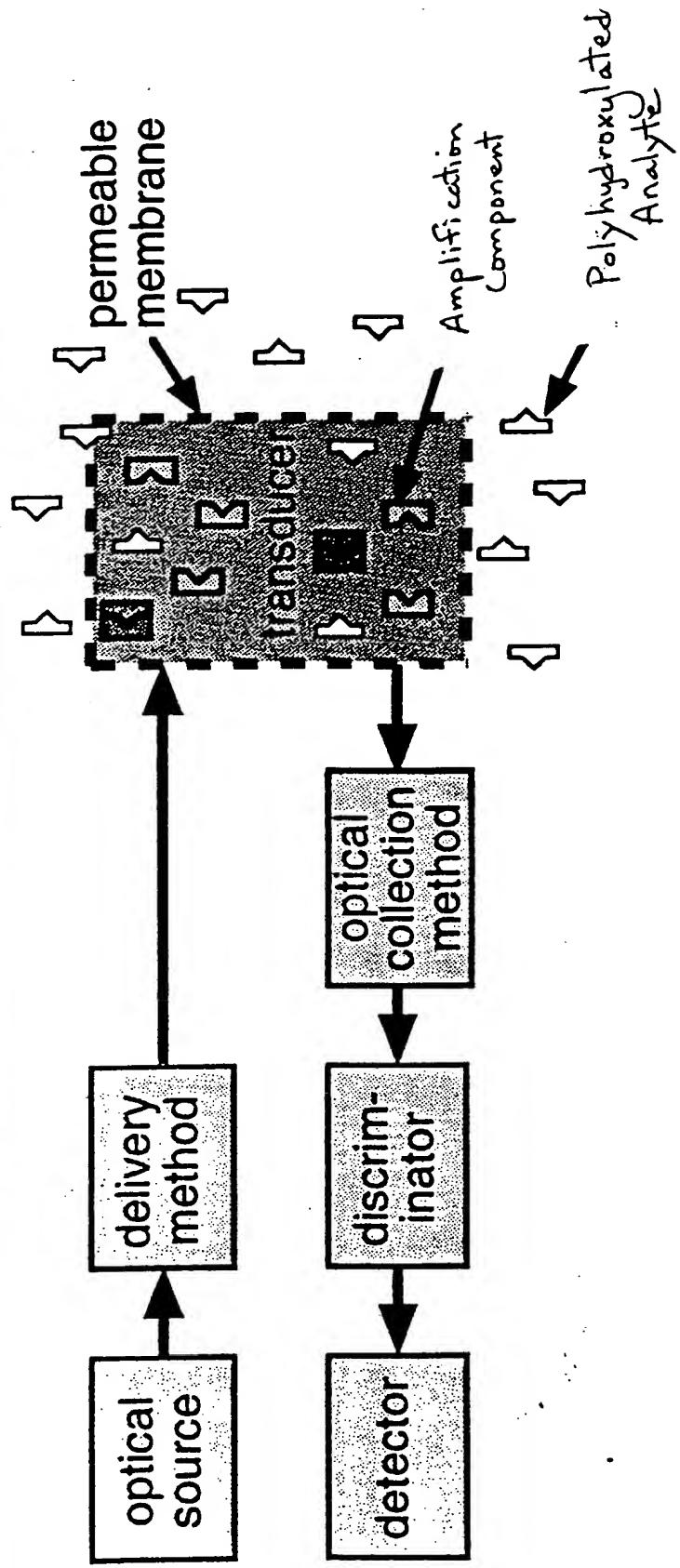


Figure 1 - Schematic of Transdermal Optical Monitoring System



## Chemically-amplified optical sensors

Figure 2



Amplification components have a high selectivity for the target analyte to be assayed

Reactions with the target analyte produce a large change in the optical properties of the amplification component

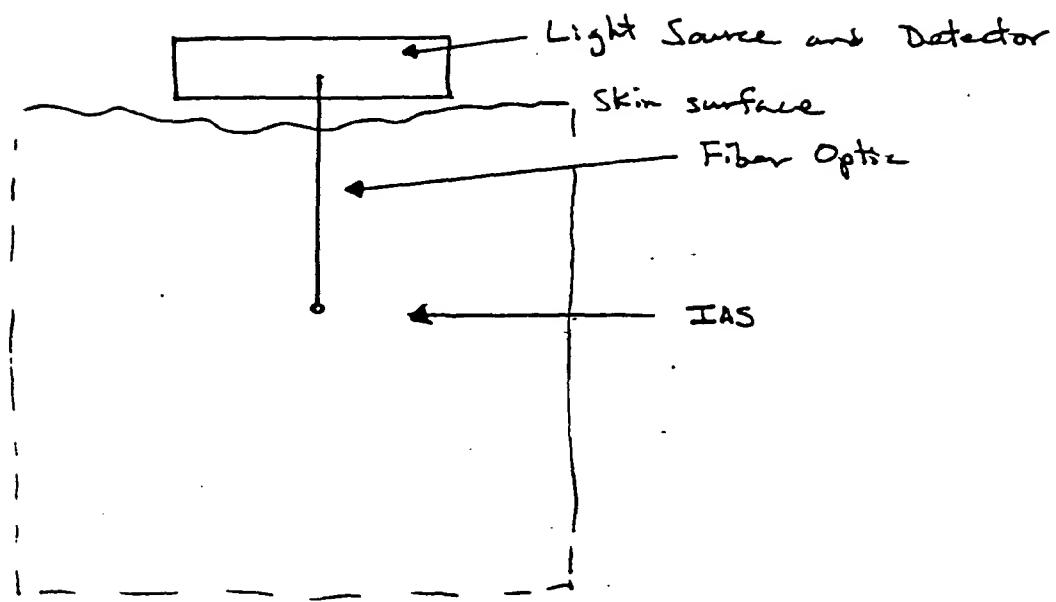


Figure 3

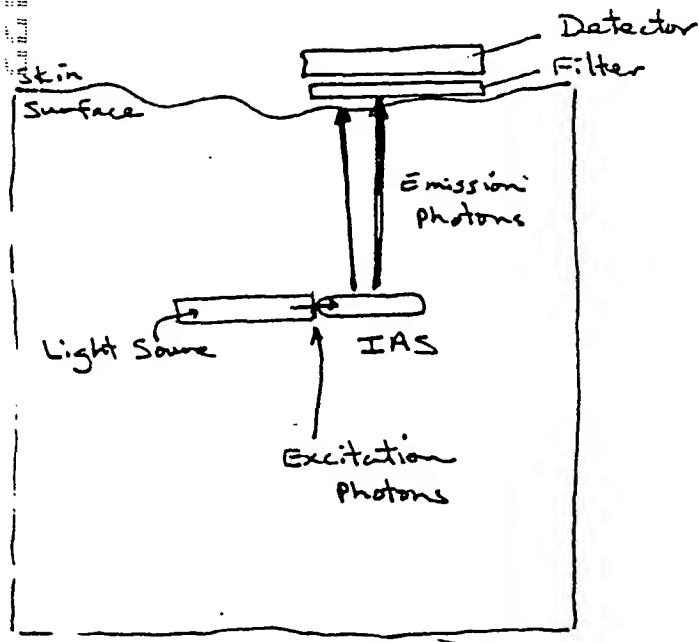


Figure 4

Figure 5

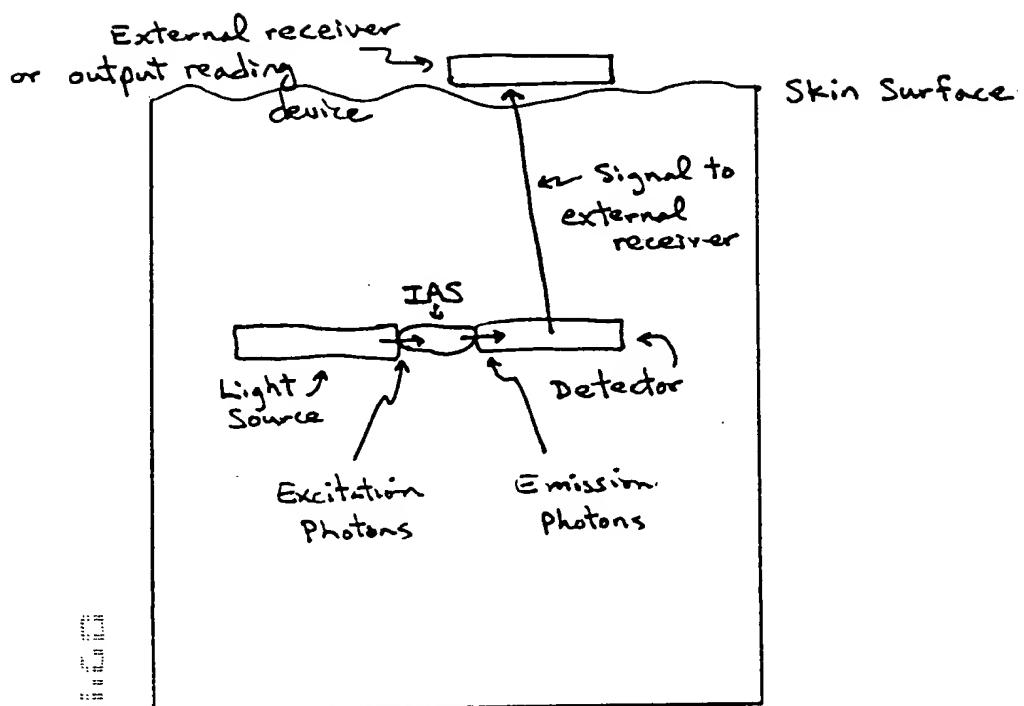


Figure 6

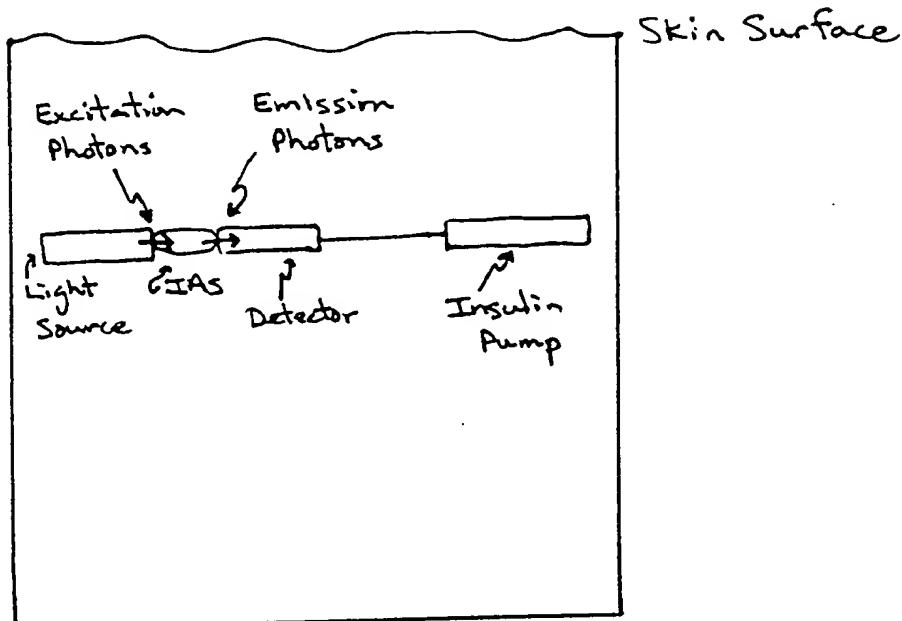


Figure 7

-- Glucose to Hydrogen Peroxide Conversion  
Followed by Optical Detection

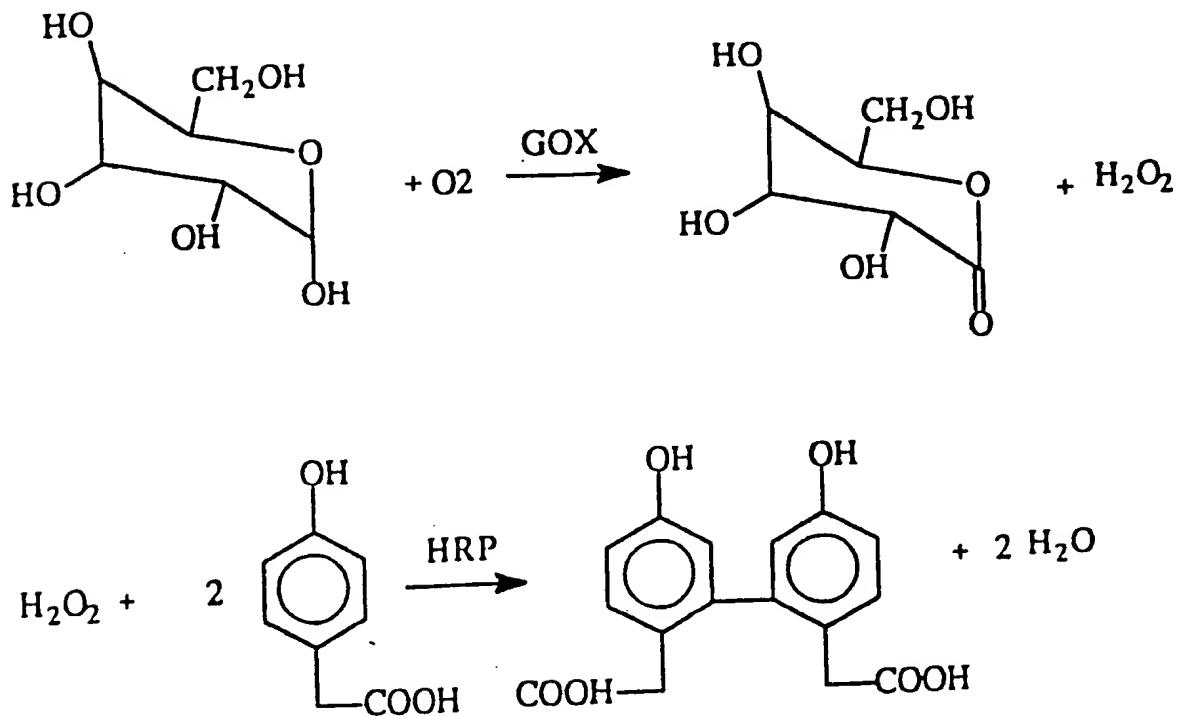


Figure 8

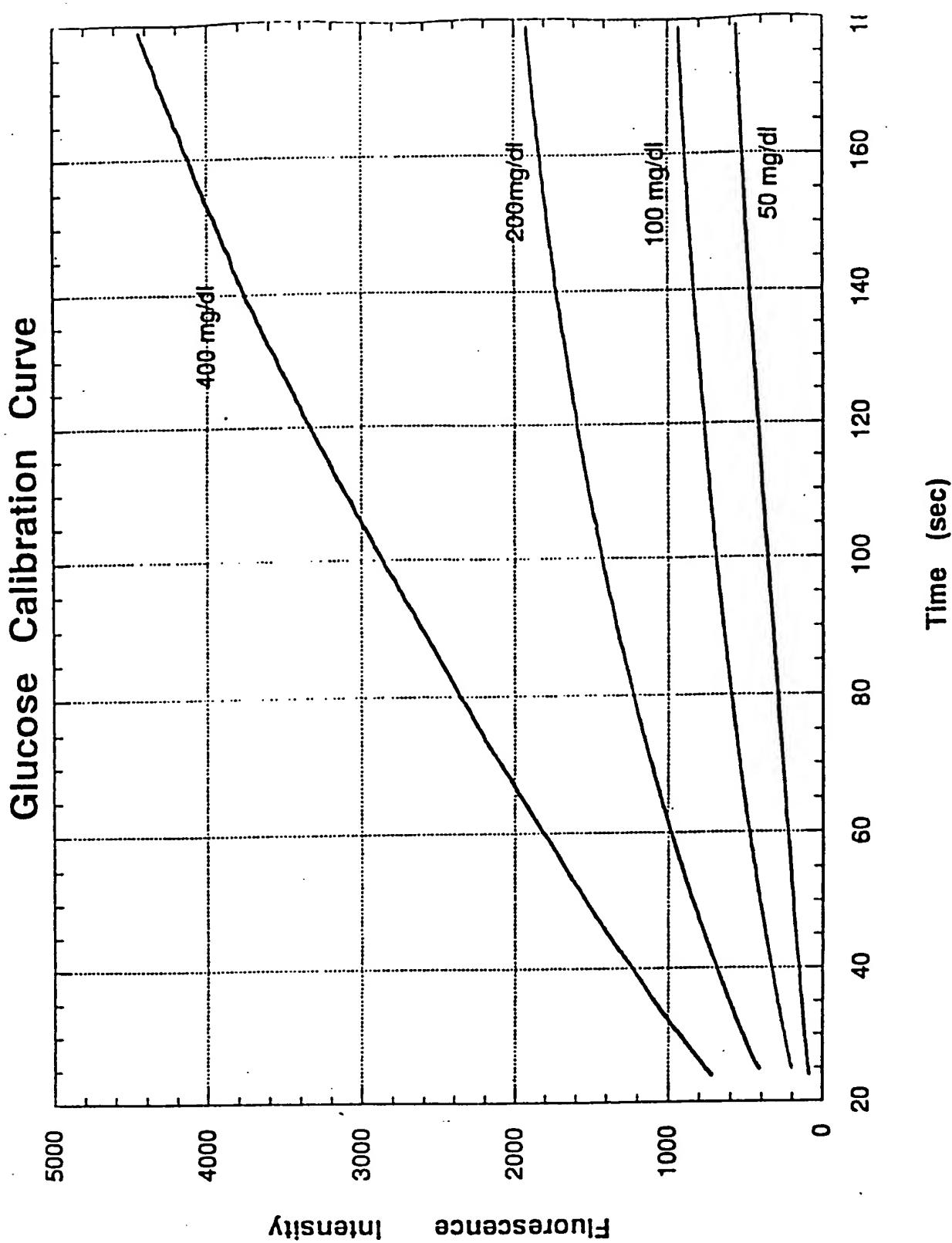


Figure 9 -- Concanavalin A Fluorescence with Glucose

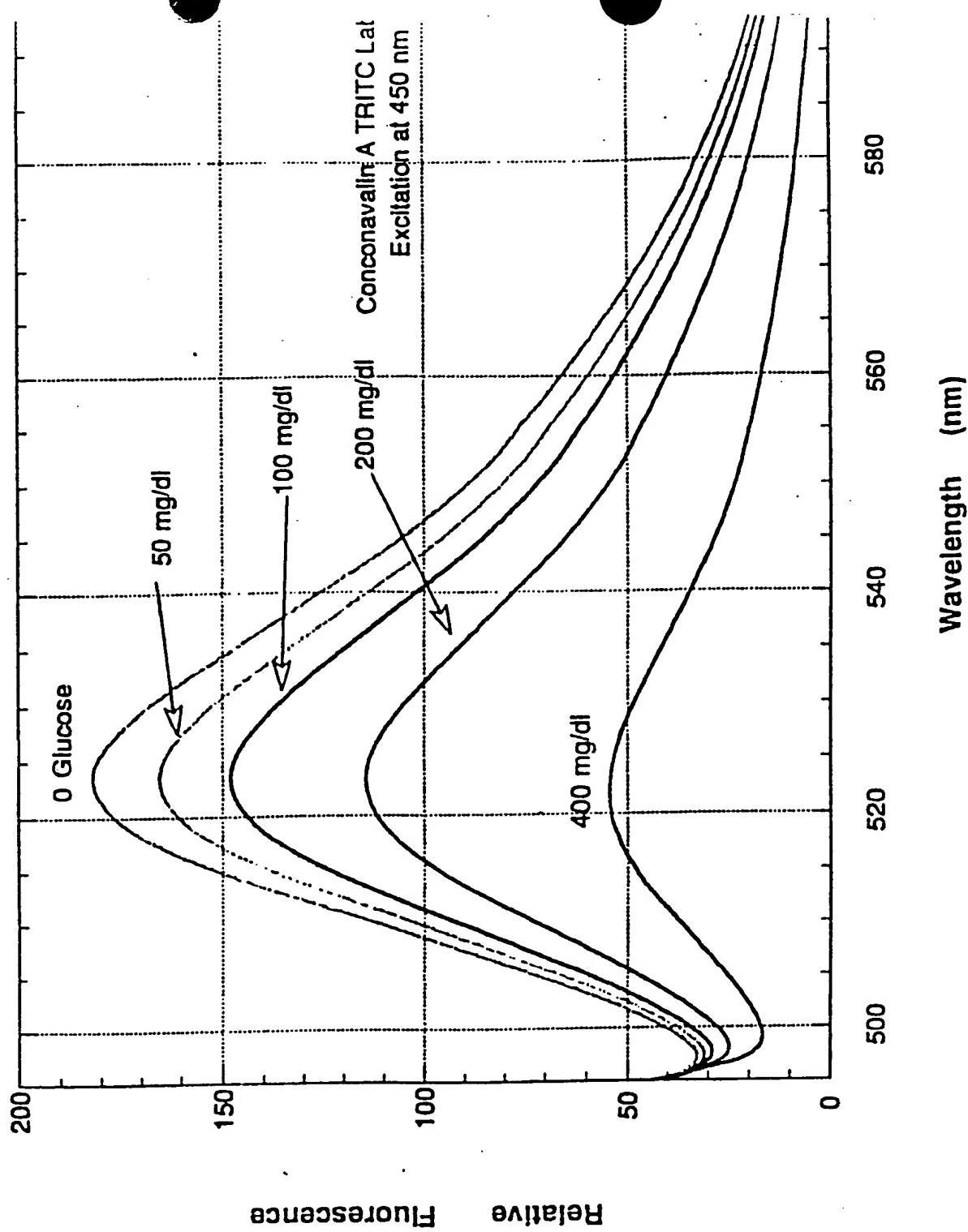


Figure 10

## Reversible Boronate Binding Chemistry

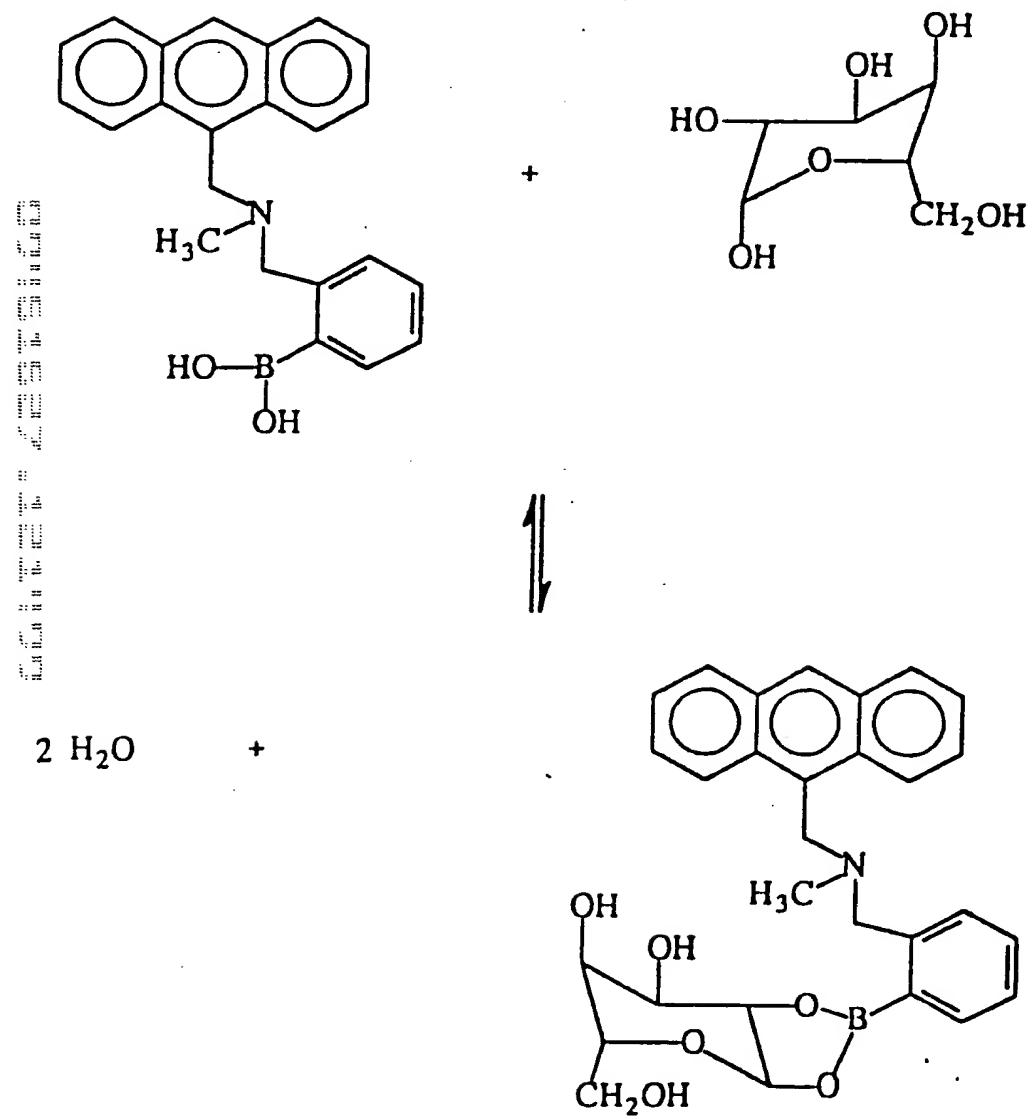
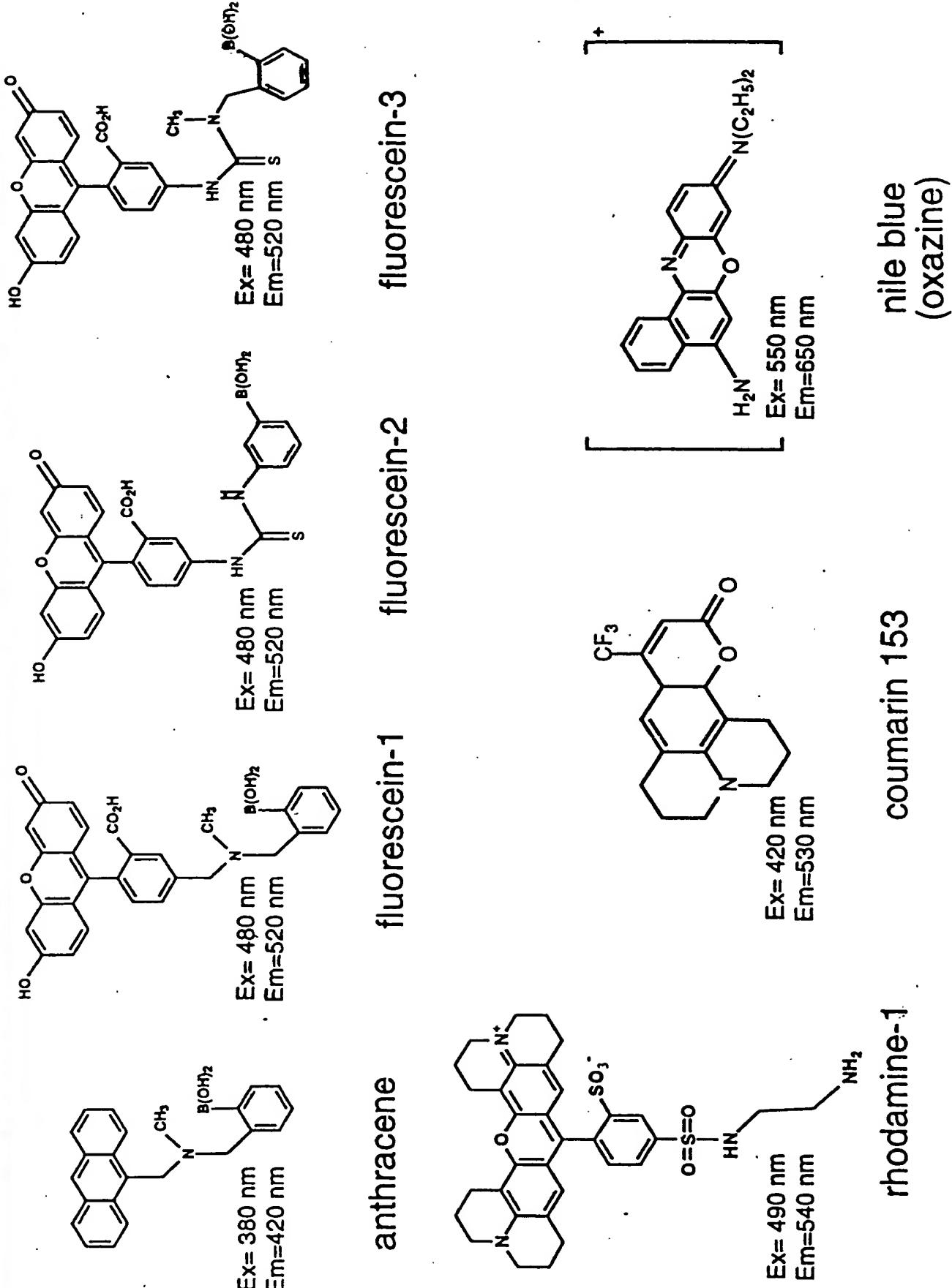


Figure 11

glucose recognizing molecules that fluoresce at longer wavelengths



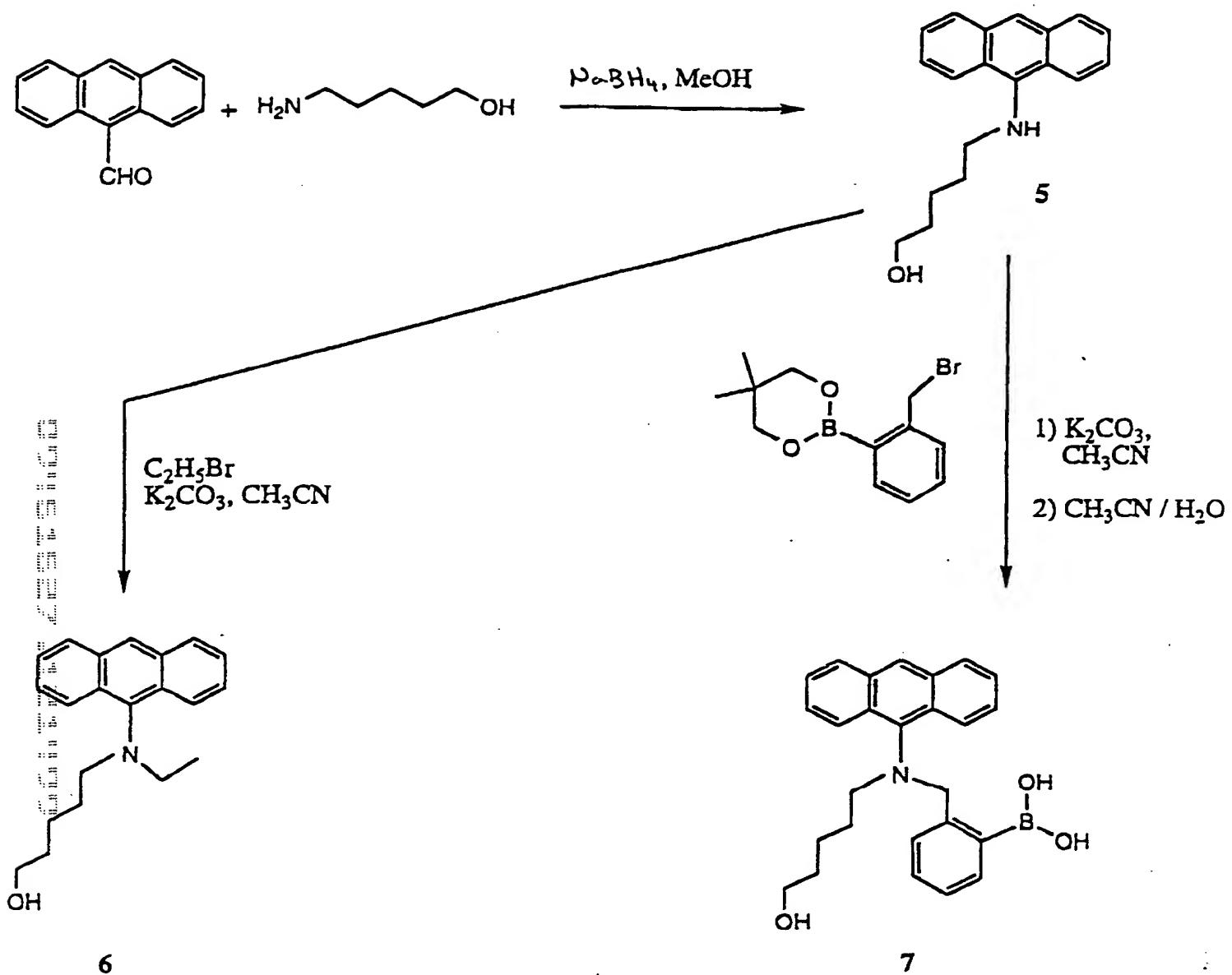


Figure 12

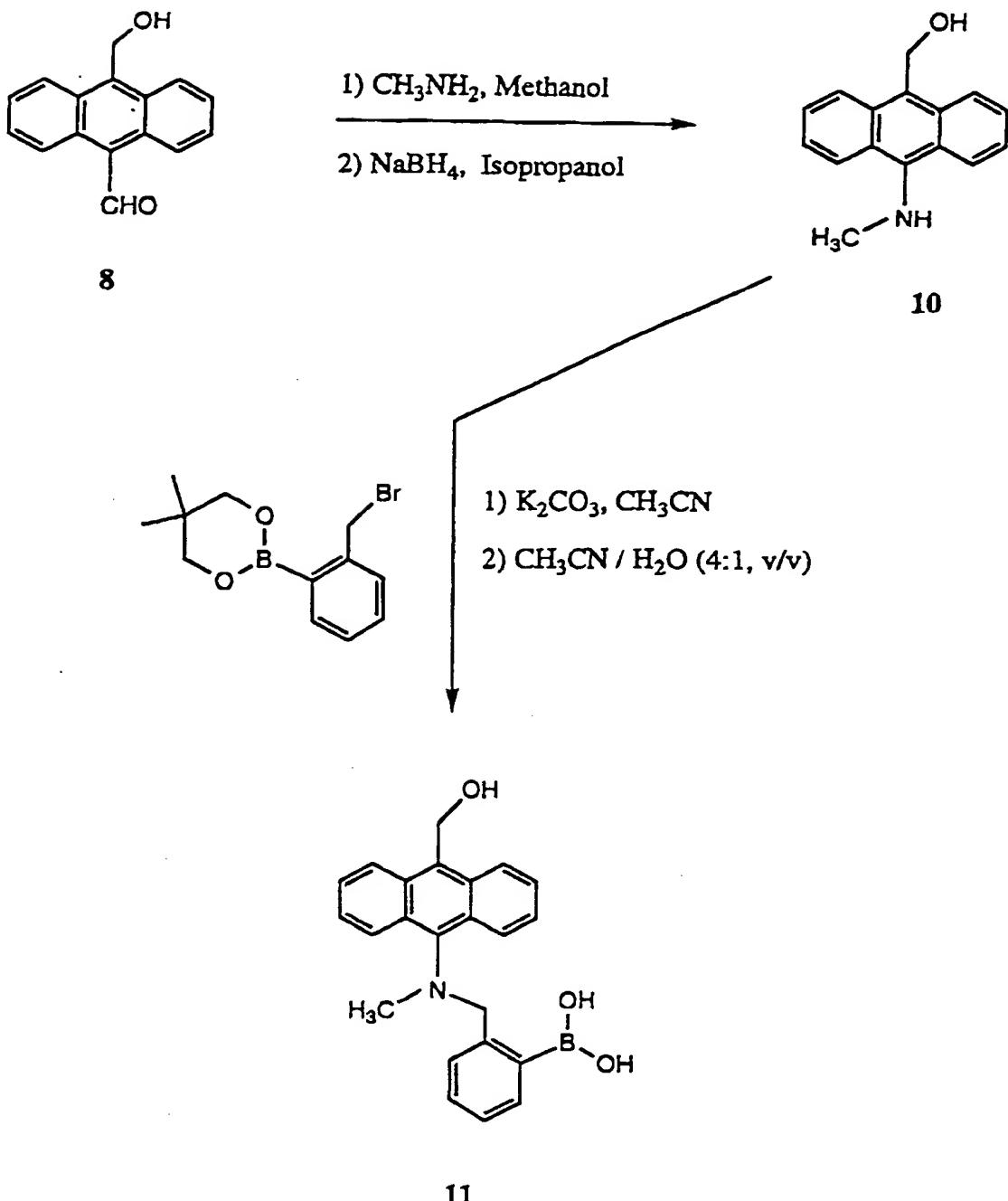
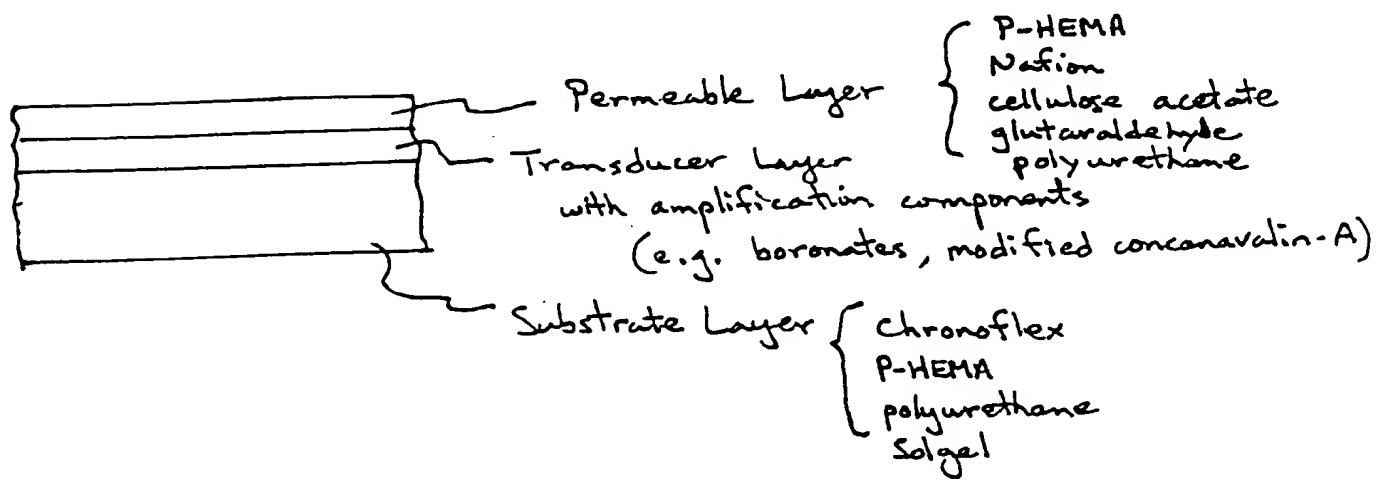
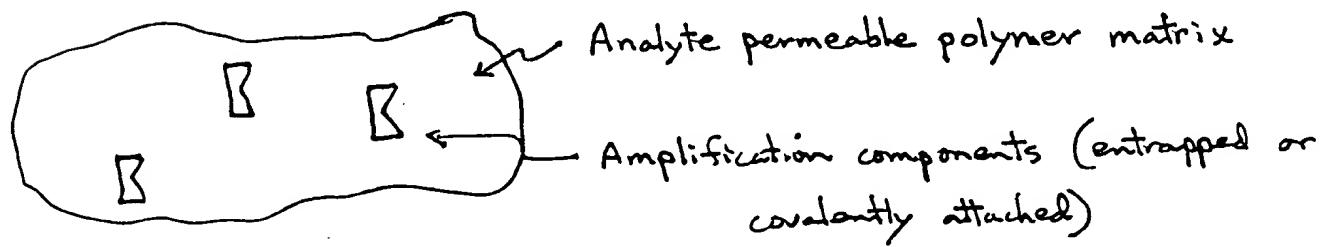


Figure 13

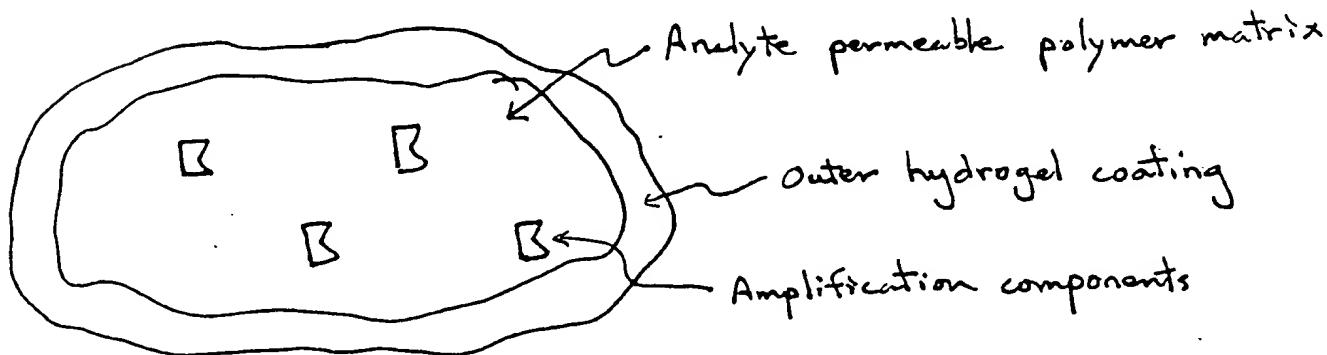
Figure 14



14A

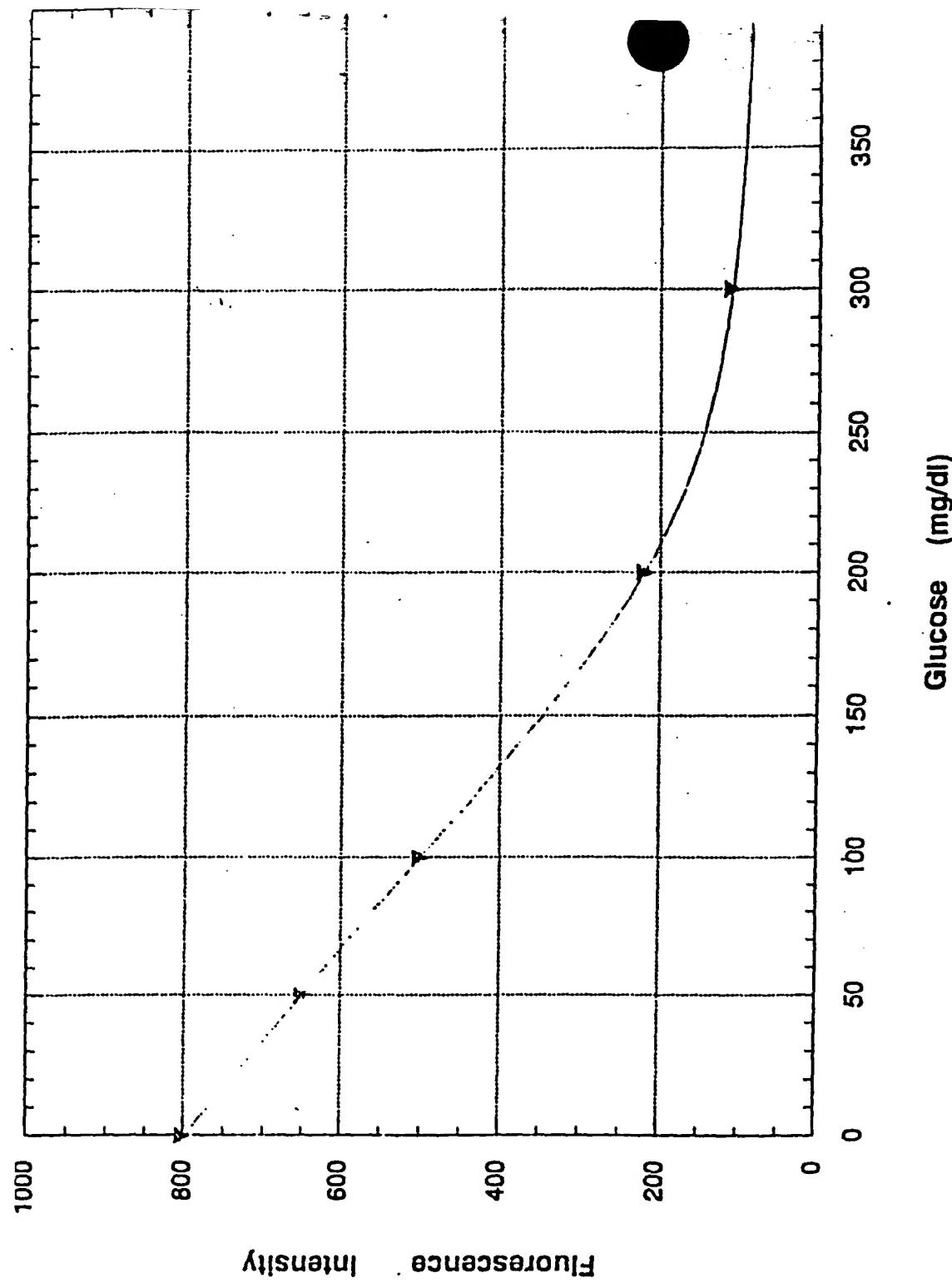


14B



14C

Figure 15 - Fluorescence Quenching of FABA by Glucose



# Reversible fluorescence of a glucose-recognizing fluorescent molecule, anthracene-boronate

the relevant clinical range (0-400 mg/dl)

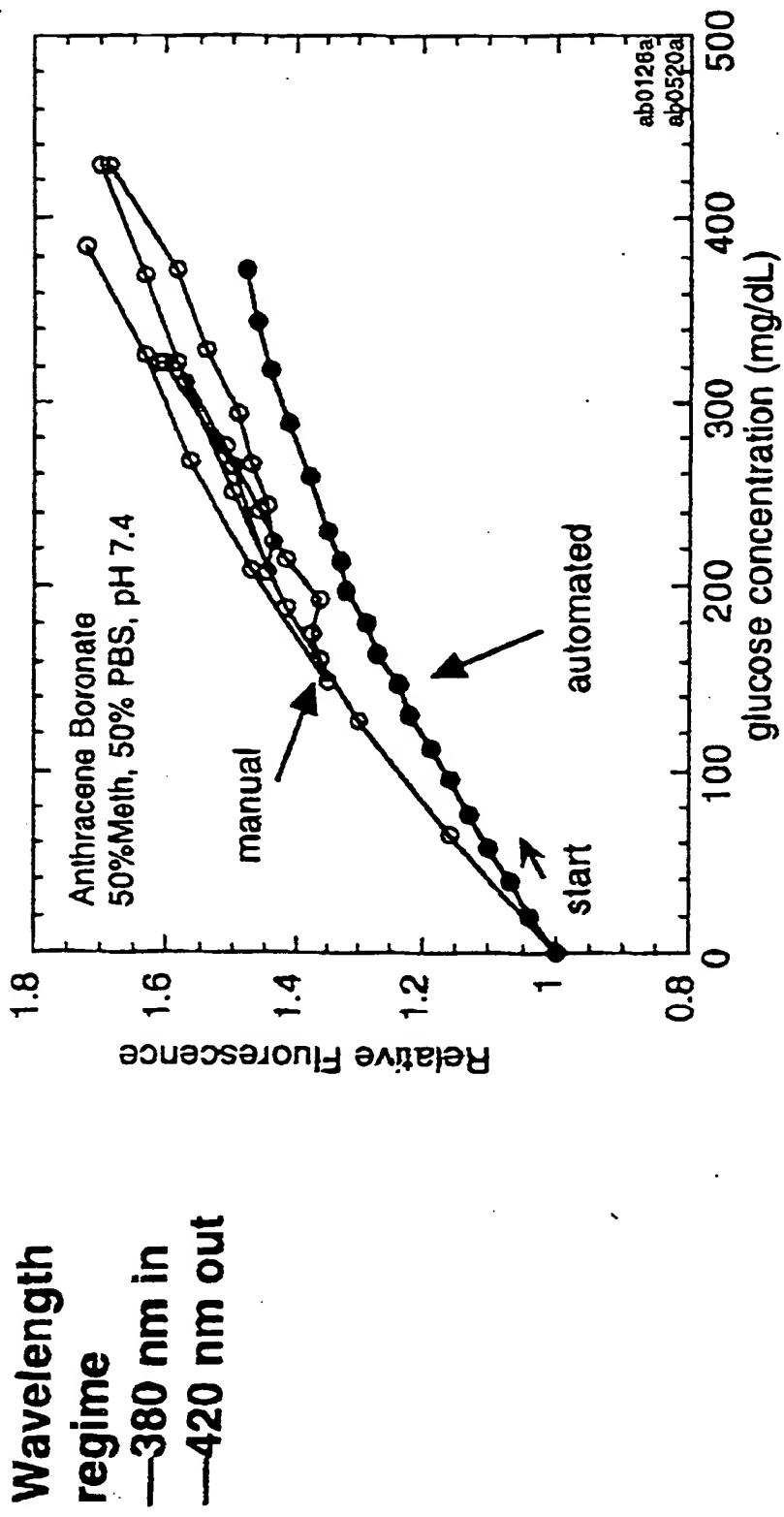


Figure 16